UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,361	09/16/2003	Fumitaka Goto	00862.023234.	9417

5514 7590 09/04/2008

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
DHINGRA, PAWANDEEP	
ART UNIT	**PAPER NUMBER**
2625	
MAIL DATE	**DELIVERY MODE**
09/04/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/662,361	GOTO ET AL.	
	Examiner	Art Unit	
	PAWANDEEP S. DHINGRA	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-8 and 10-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-8 and 10-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

- This action is responsive to the following communication: Request for Continued Examination (RCE) filed on 06/12/2008.
- Claims 2-3 and 9 are cancelled.
- Claims 1, 4-8 and 10-16 are now pending.

Response to arguments

Applicant's arguments filed 06/12/2008 have been fully considered but they are not persuasive.

With respect to applicant's arguments, on pages 9-10, that both Uekusa and Tachibana fail to disclose "corrector acquires the feature amount from data of a representative value group of the image data stored in the memory area, and then releases the memory area storing the representative value group, before execution of the first correction and before execution of the second correction is completed for the entire image data" as recited in claim 1.

In reply, examiner asserts that the combination of Uekusa and Tachibana has been shown to clearly teach the above argued limiatitations (please see discussion of claim 1 below).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., before execution of both of a first correction according to a feature amount of the entire image data, and a second correction, different from the first correction, is completed for the entire image data) are not recited in the rejected claim(s). Although

the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/12/2008 has been entered.

Examiner Notes

Examiner cites particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

   (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 5-8, 10-11, 13 and 15-16 are rejected under 35 U.S.C. 103 as being unpatentable over Uekusa et al., US 2001/0013953 in view of Tachibana et al., US 5,812,283.

Re claim 1, Uekusa et al. discloses an image processing apparatus (see figure 1) comprising: a corrector, arranged to apply, to image data (see claim 7) stored in a memory area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, and input image data are stored in memory), a first correction according to a feature amount of the entire image data (input image data) (see abstract), and a second correction (i.e. color matching) which is different from the first correction (see abstract, figs. 1-4, note that color matching step is performed on the corrected image data and is different from first step of correction image input data); a processor (see figure 2 and claim 7), arranged to apply an image process required to print on a print medium to the image data output from said corrector (see claim 7 and figures 1-3; paragraphs 0031-0037); and a recorder, arranged to print an image on the print medium based on the image data output from said processor (see figures 1-3, 0031-0037, 136-138), wherein said corrector acquires the feature amount from data of a

representative value group of the image data (see abstract, and figure 12 with corresponding text) stored in the memory area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, input image data and values are stored in memory), before execution of the first correction and before execution of the second correction is completed for the entire image data (see figs. 1-3, claim 7, abstract, and paragraphs 30-37, 83, 130-138). Uekusa also discloses memory area storing the representative value group (see figure 12 with corresponding text and paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, input image data and values are stored in memory).

Uekusa fails to disclose acquiring the feature amount from data stored in the memory area and then releasing the memory area storing the data, before execution of image processing is completed for the entire image data.

However, Tachibana et al. teaches acquiring the feature amount from data stored in the memory area and then releasing the memory area storing the data, before execution of image processing is completed for the entire image data (see figures 1-3, 6-9, abstract, claim 1, column 1, lines 10-60, column 3, line 55-column 6, line 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana in order to have the corrector acquire the feature amount from data of a representative value group of the image data stored in the memory area, and then

release the memory area storing the representative value group, before execution of the first correction and before execution of the second correction is completed for the entire image data such that an image processing system is acheived in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9.

Re claim 5, Uekusa et al. further discloses corrector further acquires the feature amount from data appended (i.e. attached) to the image data (see abstract, and figure 8) stored in the memory area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, and input image data are stored in memory).

Re claim 6, Uekusa et al. further discloses the data appended to the image data includes at least one of the feature amount and thumbnail image of the image data (see figure 8, and paragraphs 0103-0111).

Re claim 7, Uekusa et al. further discloses the feature amount includes at least one of histograms associated with some colors (see paragraph 0042, and figure 10), information associated with some colors that represents a highlight part (see figure 11, paragraph 0025), information associated with some colors that represents a shadow part (see paragraph 0025), and information associated with hue and saturation in the entire image data or partial data (see paragraphs 0072-0074) stored in the memory

area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, and input image data are stored in memory).

Regarding claims 8 & 10, they are interpreted and thus rejected for the reasons set forth above in the rejection of claim 1, since claims 8 & 10 disclose a method, and a computer readable medium of instructions for carrying out the method that corresponds to the image processing system of claim 1, thus the method is inherent and it simply provides functionality for the structural implementation found in the image processing system of claim 1.

Re claim 11, Uekusa et al. further discloses a printer (see figure 1) comprising: an interface, arranged to input at least partial image data of a selected image (i.e. input image) from a memory (see figure 1, and steps S10-S90 in figure 2, paragraph 83); and a processor (see figure 1), arranged to perform a first process for performing correction, which is based on the amount of characteristic of the selected image (i.e. input image) expressed by the input image data, on the selected image (see figures 2-3, abstract, and paragraphs 0031-0067, and claim 7), and a second process (i.e. color matching) for performing predetermined processing on the selected image (see paragraphs 31-37, 83-84, 130-138, 122, 146), wherein the amount of the characteristic is extracted from a representative value group of the input image data (see abstract, and figure 12 with corresponding text) stored in a memory area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, input image data and values are stored in memory) which is used in at least one of the first and second processes (see fig. 1-4, claim 7 & paragraph 31, 35, 83, 96, 130-138, 149, 156 note that source profile,

input image data, values and application software or programs are stored in memory, which is used by the computer or CPU to carry out at least one of the first and second processes), before the first and second processes are performed on image data (see figs. 1-3; claim 7, abstract, and paragraphs 31-37, 83-84, 130-138, 122, 146). Uekusa also discloses memory area storing the representative value group (see figure 12 with corresponding text and paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, input image data and values are stored in memory).

Uekusa et al. fails to disclose a printer comprising: an interface, arranged to input at least partial image data of a selected image not from a computer but from a memory card; and then the memory area storing the data is released, before performing processing on image data in a band or block unit of the selected image using a band or block memory.

However, Tachibana et al. teaches a printer (fig. 1, facsimile) comprising: an interface, arranged to input at least partial image data of a selected image not from a computer but from a memory card (see figures 1-9; column 2, line 20-column 6, line 11); and then the memory area storing the data is released, before performing processing on image data in a band or block unit of the selected image using a band or block memory (see figures 1-9; abstract, claim 1, column 1, lines 10-60; column 2, line 20-column 6, line 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by

Uekusa to include the memory management (releasing) techniques as taught by Tachibana in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9.

Re claim 13, Uekusa discloses the amount of the characteristic is acquired using a histogram of the input image data (see abstract, figures 7-10, and paragraphs 107-112)

Re claim 15, Uekusa discloses an operation panel (see figure 1) which receives the selection of image stored in the memory card and a selection of image process to be applied to the selected image (see paragraphs 30-37, 83-86, 130-138, 122, 146).

Re claim16, Uekusa discloses an inkjet printer (see paragraph 31) comprising: an interface, arranged to input at least partial image data of a selected image (i.e. input image) from a memory (see figure 1, and steps S10-S90 in figure 2, paragraph 83); and a processor (see figure 1), arranged to perform a first process for performing correction, which is based on the amount of characteristic of the selected image (i.e. input image) expressed by the input image data, on the selected image (see figures 2-3, abstract, and paragraphs 0031-0067, and claim 7), and a second process (i.e. color matching) for performing predetermined processing on the selected image (see paragraphs 31-37, 83-84, 130-138, 122, 146), wherein the amount of the characteristic is extracted from a

representative value group of the input image data (see abstract, and figure 12 with corresponding text) stored in a memory area (see fig. 1-4, claim 7 & paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, input image data and values are stored in memory) which is used in at least one of the first and second processes (see fig. 1-4, claim 7 & paragraph 31, 35, 83, 96, 130-138, 149, 156 note that source profile, input image data, values and application software or programs are stored in memory, which is used by the computer or CPU to carry out at least one of the first and second processes), before the first and second processes are performed on image data (see figs. 1-3; claim 7, abstract, and paragraphs 30-37, 83-84, 130-138). Uekusa also discloses memory area storing the representative value group (see figure 12 with corresponding text and paragraph 31-35, 83, 96, 130-138, 149, note that source profile, table, input image data and values are stored in memory).

Uekusa et al. fails to disclose a printer comprising: an interface, arranged to input at least partial image data of a selected image not from a computer but from a memory card; and a print head for inkjet printing, arranged to discharge ink from a nozzle in accordance with image data output from said processor; and then the memory area storing the data is released, before performing processing on image data in a band or block unit of the selected image using a band or block memory.

However, Tachibana et al. teaches an inkjet printer (column 8, line 7) comprising: an interface, arranged to input at least partial image data of a selected image not from a computer but from a memory card (see figures 1-9; column 2, line 20-column 6, line 11); and a print head (i.e. recording head) for inkjet printing, arranged to discharge ink from

a nozzle in accordance with image data output from the processor (see column 2, lines 38-41, column 3, lines 16-44); and then the memory area storing the data is released, before performing processing on image data in a band or block unit of the selected image using a band or block memory (see figures 1-9; abstract, claim 1, column 1, lines 10-60; column 2, line 20-column 6, line 11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9.

3. Claims 12 & 14 are rejected under 35 U.S.C. 103 as being unpatentable over Uekusa et al., US 2001/0013953 in view of Tachibana et al., US 5,812,283 further in view of well known art.

Re claim 12, Uekusa discloses the input image data corresponds to various types of images which can be selected (see paragraph 106-107). It further discloses that Photoshop software is commonly used to perform various kinds of image manipulations in terms of size, etc. (see paragraph 107).

Uekusa fails to explicitly disclose the representative value group corresponds to a reduced image of the selected image.

However, Official Notice is taken to note that ability to select and reduce any image data or data of a representative value group of the image data is notoriously well known and commonly used in the art. It would have been obvious to have Photoshop software reduce the size of the selected image or data of a representative value group of the image data and include it into various types of images disclosed in fig. 8 of Uekusa, and used the reduced image data as the input image data or data of a representative value group of the image data upon selection by application software for the benefit of providing the user with increased flexibility and options.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9.

Re claim 14, Uekusa discloses compressing the image data (see paragraph 138). Uekusa fails to explicitly disclose the selected image has been compressed by the JPEG encoding.

However, Official Notice is taken to note that ability to compress the selected image data by the JPEG encoding is notoriously well known and commonly used in the art. It would have been obvious to compress the selected image data or input image data by JPEG encoding for the benefit of having the storage-effective memory management without losing much image resolution and details.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9.

4. Claim 4 is rejected under 35 U.S.C. 103 as being unpatentable over Uekusa et al., US 2001/0013953 in view of Tachibana et al., US 5,812,283 further in view of Tsuchiya et al., US 6,980,326.

Re claim 4, Uekusa fails to further disclose the representative value group includes at least one of pixel values regularly selected from the image data, pixel values randomly selected from the image data, pixel values of reduced-scale image data of the image data, and DC component values of a plurality of pixels of the image data.

However, Tsuchiya et al. discloses the representative value group includes at least one of pixel values regularly selected from the image data (see figure 5), pixel values randomly selected from the image data (see figure 5, note that any pixel value can be selected as notable pixel, randomly from the set of values), pixel values of reduced-scale image data of the image data (see figure 7), and DC component values of a plurality of pixels of the image data (see figure 3; column 5, lines 22-31, and column 11, line 65 – column 12, line 5, note that the DC component consists of Y, Cr, and Cb data).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the image processing method & apparatus as disclosed by Uekusa to include the memory management (releasing) techniques as taught by Tachibana, and the image correction method as taught by Tsuchiya in order to have an image processing system in which the processing is performed on blocks of image data and the memory is released block by block before the processing for the entire image data is completed for the benefit of having a cost-effective and enhanced performance of image processing without using a large capacity memory as taught by Tachibana at column 1, lines 30-60, and figures 6-9, and providing “an image process method capable of achieving high-level color noise reduction without deteriorating apparent (or seeming) resolution for a color signal” as taught by Tsuchiya at column 2, lines 47-52.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAWANDEEP S. DHINGRA whose telephone number is (571)270-1231. The examiner can normally be reached on M-F, 9:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler L. Haskins can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. D./
Examiner, Art Unit 2625

/Twyler L. Haskins/
Supervisory Patent Examiner, Art Unit 2625